

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Status of Claims:

Claims 38-40 are currently being cancelled.

Claims 1, 3, 4, 29, 32, 37 and 43-45 are currently being amended.

No claims are currently being added.

This amendment amends and cancels claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending and canceling the claims as set forth above, claims 1-17, 29-37 and 41-47 are now pending in this application.

Request for entry of After-final Amendment and Reply:

It is respectfully requested that this after-final Amendment and Reply be considered and entered, since it is believed to place this application in condition for allowance without requiring any further consideration and/or search.

Claim Rejections – 35 U.S.C. § 112, First and Second Paragraphs:

In the Office Action, claims 1-17 and 29-47 were rejected under 35 U.S.C. § 112, first and second paragraphs, for the reasons set forth on pages 2 and 3 of the Office Action. First, it is noted that the claim features that supposedly resulted in the 35 U.S.C. § 112, first and second paragraph rejections, are not recited in presently pending independent claim 46 and its dependent claim 47. Thus, clarification is requested as to why those claims were rejected under 35 U.S.C. § 112, first and second paragraphs.

With respect to presently pending claims 1-17, 29-36 and 41-45, those claims have been amended to change “dynamically aligning” to “aligning”, and to include “a magnetic field, an electromagnetic field, or combinations thereof”. Further, with respect to the issue concerning “mechanical field”, that feature has been removed from the claims.

Accordingly, all of the presently pending claims fully comply with the 35 U.S.C. § 112, first and second paragraphs.

Claim Rejections – Prior Art:

In the Office Action, claims 1-17 and 29-47 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,194,769 to Martin in view of U.S. Patent No. 5,238,729 to Debe. This rejection is traversed with respect to the presently pending claims under rejection, for at least the reasons given below.

First, presently pending independent claim 1 has been amended to include the features of its now-cancelled dependent claim 40; presently pending independent claim 29 has been amended to include the features of its now-cancelled dependent claim 38; and presently pending independent claim 32 has been amended to include the features of its now-cancelled dependent claim 39.

The Office Action appears to assert that the features recited in claims 38-40, which are now respectively incorporated into presently pending independent claims 29, 32 and 1, are obvious design choices. Applicant strongly disagrees.

For example, as explained on page 11, line 27 to page 12, line 3 of the specification, as recited in presently pending independent claims 29 and 32, the use of different polarization mechanisms having different directions and different strengths for aligning the conductive region provides for an improved sensor array, and such features are not an obvious design choice. If the Examiner is to maintain this rejection, he is requested to provide a prior art teaching that explicitly discloses this feature, or otherwise withdraw this rejection.

Also, presently pending independent claim 1 recites that the respective nonconductive regions of the first and second sensors of the sensor array have a different concentration of a

same type of nonconductive organic material with respect to each other. This provides for a predetermined inter-sensor variation that improves characteristics of the sensor array. See page 12, lines 4-10 of the specification, for example. Again, such features are not an obvious design choice. If the Examiner is to maintain this rejection, he is requested to provide a prior art teaching that explicitly discloses this feature, or otherwise withdraw this rejection.

Thus, presently pending independent claims 1, 29 and 32 are patentable over the combination of Debe and Martin.

Dependent claims 43-45 recite features in which the alignment occurs after fabrication, whereby Martin clearly describes a process in which aggregation occurs during fabrication. See Abstract of Martin, which states that the “conducting particles of such field-structured materials can be precisely controlled during fabrication.” The final Office Action does not address this distinction that was mentioned in the previously-filed response.

Accordingly, claims 43-45 are patentable over the cited art of record for these additional reasons.

With respect to presently pending independent claim 46, that claim recites, among other things,

first and second sensors, wherein said first sensor comprises a sensing region of an aligned conductive material and a nonconductive region, each of which sensors provides a different detected response in the presence of said analyte;

wherein said aligned conductive material comprises aligned distinct particles;

wherein said sensor array is electrically connected to a computer comprising a resident algorithm; the computer detecting said response and comparing said response to a known sensor array response profile, and

wherein the conductive material is non-magnetic.

In its rejection of claim 45, the final Office Action merely states that claim 46 recites “the use of different concentrations of non-organic material and non-magnetic material, in which such materials are well known and to use in Martin et al in view of Debe would have been within the purview of obviousness to one having ordinary skill in the art.” Applicant

strongly disagrees. The use of different concentrations of non-organic material and non-magnetic material provides for a diverse sensor array that improves over the same-type sensor array of Martin and Debe. If the Examiner is to maintain this rejection, he is respectfully requested to provide a prior art teaching that explicitly discloses this feature, or otherwise withdraw this rejection.

Furthermore, independent claim 46 recites that the conductive material is non-magnetic. Neither Martin nor Debe teaches such a feature. In particular, as correctly recognized in the previous Office Action, Debe does not teach or suggest the use of aligned conductive materials. Rather, Debe places a material in a substrate, places a conformal coating on that material, and then places an encapsulation layer on the conformal coating. Martin teaches the use of a magnetic conductive material, which is clearly different from the subject matter recited in claim 46.

Accordingly, presently pending independent claim 46 patentably distinguishes over the combination of Martin and Debe.

Conclusion:

Since all of the issues raised in the Office Action have been addressed in this Amendment and Reply, Applicants believe that the present application is now in condition for allowance, and an early indication of allowance is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of

papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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